

SARUA

STUDENT ACTION RESEARCH FOR UNIVERSITY ACCESS

TRAINING AND RESOURCE MANUAL

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TABLE OF CONTENTS

PREFACE	iii
<i>The Structure of the Manual and its Use</i>	v
1. ACCESS TO UNIVERSITY: WHAT DO WE KNOW	1
1.1 <i>Socio-economic Disadvantage</i>	2
1.2 <i>Indigenous Australians</i>	2
1.3 <i>Gender</i>	3
1.4 <i>Non English Speaking Backgrounds</i>	3
1.5 <i>Rural and Isolated Areas</i>	3
1.6 <i>People with Disability</i>	4
1.7 <i>General Issues</i>	4
2. ALL ABOUT SARUA	7
2.1 <i>Aims of the Project</i>	7
2.2 <i>Benefits to the Schools, Teachers and Students</i>	7
2.3 <i>Roles of Participants</i>	8
2.3.1 <i>The Role of the School</i>	8
2.3.2 <i>The Role of the Coordinator</i>	8
2.3.3 <i>The Role of the Students</i>	8
2.3.4 <i>The Role of the External Collaborators</i>	8
2.4 <i>Participants' Experiences in Past SARUA Projects</i>	9
2.4.1 <i>One Coordinator's Experience</i>	9
2.4.2 <i>Students' reflections about SARUA</i>	10
3. SETTING UP A SARUA PROJECT	13
3.1 <i>Overview of the Project's Structure</i>	13
3.2 <i>Understanding Action Research</i>	14
3.3 <i>Selecting the Students</i>	15
3.4 <i>Developing Networks for the Project</i>	17
3.5 <i>Developing and Maintaining Group Work</i>	18
3.6 <i>Regular School Meetings</i>	17
4. PHASE 1 - TRAINING AND PLANNING	19
4.1 <i>Introduction to Project</i>	19
4.2 <i>Increasing Knowledge about Higher Education</i>	19
4.3 <i>Social Issues Related to University Access</i>	20
4.4 <i>Generating Issues/Hypothesis to Inform Your Action/Research</i>	23

5. PHASE 2 - CONDUCTING RESEARCH	27
<i>5.1 Deciding on Specific Research Questions</i>	27
<i>5.2 Designing and Implementing a Plan</i>	28
<i>5.3 Analysing the Data Gathered</i>	31
5.3.1 Findings	31
5.3.2 Conclusions	33
5.3.3 Recommendations	33
 6. PHASE 3 - ACTION	 35
 7. PHASE 4 - REFLECTION AND DOCUMENTATION	 37
<i>7.1 Reflection</i>	37
<i>7.2 Documentation</i>	38
7.2.1 Content and Structure of Your Report	38
7.2.2 Writing Style	39
7.2.3 Developing the Report	40
 REFERENCES	 43
 APPENDICES	
<i>Appendix 1 - External Collaboration and Support</i>	47
<i>Appendix 2 - Information Sheet for Students and Parents</i>	51
<i>Appendix 3 - Developing and Maintaining Cooperative Groups</i>	53
<i>Appendix 4 - Developing Interviews</i>	57
<i>Appendix 5 - Developing Surveys/Questionnaires</i>	59
 ADDITIONAL RESOURCES ATTACHED TO THIS MANUAL	
<i>What is Participatory Action Research?</i>	
<i>Selection of Past Reports from SARUA Students</i>	
<i>Pamphlets - QUT, QSTEP, NEXUS, Oodgeroo Unit</i>	
<i>Video: Bridging the Gap</i>	

PREFACE

Over the past few decades, some university staff have been concerned that certain groups of students are under-represented in their universities and courses. Research from the 1960's has shown that several sections of society do not have the same access to university as the rest of society. In the 1970's Australia introduced free higher education, but unfortunately, recent research has shown that while the overall situation has improved for some of these groups in the past 20-30 years, the university population still does not reflect the distribution of the overall population. In particular, the under-represented groups Indigenous Australians, women in non-traditional and postgraduate courses, and people from some non-English speaking backgrounds (NESB), low socio-economic sections of society, rural and geographically isolated areas.

Queensland University of Technology is committed to the principles of equity and affirmative action. The QUT statement of mission and goals states that the University will promote “equitable access to education and employment”. In 1992, with assistance from the Equity Committee and the Centre for Mathematics and Science Education, a group of academics from the Faculty of Education decided to tackle aspects of the problem. We had two aims. First, we wanted to identify the factors preventing students from certain low represented groups from participating in university studies, and second to act towards increasing their participation.

The project plan was guided by three main principles.

- Firstly, we believe that the people involved in and affected by the problem should take responsibility in researching it and working towards its solution. Hence, we designed this project to be collaborative between high school students, their teachers, their community and staff from the University.
- Secondly, we believe that the project should benefit its “subjects”. Therefore, we designed this project around the students themselves as researchers - not only are the students in better positions to know the inside story, but while they are being involved in this project they are gaining information about university and developing high level skills that are useful when they get there.
- Thirdly, we believe that research that does not lead to action is impotent and action that is not based on research is ignorant. The action research tradition provided us with a model of social action and change that combines research with action in a cyclic and intertwining manner.

The project began in 1992 in a high school situated in a low socio-economic area in a south-eastern suburb of Brisbane. During the following two years the project was trialed in a similar school as well, and was supported by a relatively large number of university staff. The student groups selected from these two schools represented a balance of student backgrounds in both gender and ethnicity. In 1995 the project passed through a significant period of expansion and change in the composition of the student groups. The project began work in three more schools with homogenous groups of Aboriginal male students and Torres Strait Islander male students through

the Aboriginal and Torres Strait Islanders Tertiary Aspiration Program (AITAP) within the Valley School Support Centre. In 1996 five additional schools joined the project, comprising both heterogenous and homogenous groupings (including Aboriginal students and Torres Strait Islander students, Polynesian students and single-gendered groupings). The project was co-funded by the Faculty of Education at QUT and the AITAP program. The name Student Action Research for University Access (SARUA) was also adopted in this year.

Each year the projects consisted of three main stages:

- I. Students attended an initial training and planning session at the university. This session dealt with some social issues affecting young people from their school and identified factors affecting their lack of access to university. Participants also developed skills in designing and implementing research and gained direct knowledge about and experience of the university and its culture. At the end of this session students planned their school-based projects, to be conducted throughout the year.
- II. Students returned to their schools to carry out their projects in their local school environments. This was accomplished through weekly school meetings between the students and their school staff with occasional visits from university staff. The school based projects consisted of either research on aspects of the problem or in designing and implementing activities to increase the awareness of the school community about university access and participation.
- III. Students and their school staff returned to the university to reflect on and document their projects. Recommendations for the next year's action and research were outlined.

In 1996 the project won the Novice Researcher award at the annual research forum organised by the Queensland Institute for Educational Research.

In 1997 the project expanded to include more schools and consolidated its activities. 1998 saw the mainstreaming of SARUA within the University's Q-Step Program. Q-Step is QUT's access program for students from socio-economically disadvantaged backgrounds, incorporating the Nexus project (a tertiary awareness project for junior high school students) and the annual Year 10 Winter School. Whilst Q-Step and Nexus focus on issues related to socio-economic status, the scope of SARUA will continue where possible to include all groups identified by QUT as under-represented in tertiary education. This move will not only ensure an ongoing commitment to SARUA but will also extend its potential. The findings of SARUA's student researchers will contribute important data to Q-Step's research base and, in the spirit of action research, will inform Q-Step and Nexus tertiary awareness and student support activities.

The project expanded nationally in 1999 with the very welcome inclusion of universities in Western Australia, New South Wales and South Australia.

In the past the number of schools involved in this project has been limited by the available funds and the schools' proximity to QUT. The purpose of this manual is to

assist more schools to initiate similar projects on their own. The list of contact addresses in the Appendices may be useful for further information and assistance.

The Structure of the Manual and its Use

This manual contains sufficient information about the project and necessary basic skills for schools, or other educational organisations, to plan and conduct their own SARUA type projects. Care has been taken to include as much information as possible, maintaining the readability of the manual and its ease of use. The manual is structured to present the big picture first and adds useful details later. We realise that schools, school staff and students may need additional support in conducting certain aspects of the project (ie, in training and reporting). Such additional support may be obtained from District Offices (Education Queensland) and/or collaborating universities.

Section 1 provides a limited literature review on findings from research and policy documents on issues related to the education of the targeted under-represented groups. Such a review may be helpful to SARUA coordinators in coming to terms with the magnitude and range of issues associated with the under-representation of particular groups in higher education. It could also be of benefit to students in identifying issues for their research and activities and also in comparing their findings with published research.

Section 2 provides a discussion of the aims and rationale of SARUA. The roles of the various participants are presented. This discussion is useful for project preparation, and in negotiating the expectations of the various collaborators in the project from within and outside the participating schools. The section concludes with testimonials from a participating school staff member and students in past years of the project.

Section 3 presents an overview of the SARUA project and gives a break down of the major decisions to be made in commencing the project in the schools. The suggested structure of the project is described in four phases, each expanded upon in the following four sections of the manual.

Section 4 suggests a program for Phase I - Planning and Training for the participating students in the project. It contains ideas for specific workshops and sessions that may be modified according to the local context of the project, ie, the available resources and times in the school. Careful planning at this stage ensures smooth running and avoids conflicts at later stages.

Section 5 deals with issues related to Phase II - Conducting Research. It provides coordinators and students with step by step procedures for planning and implementing research activities. Naturally, supplementary material may be needed, which can be provided by consultation with more experienced researchers.

Section 6 deals with issues related to Phase III - Action activities in the project.

Section 7 deals with issues related to Phase IV - Reflection and Documentation, which form an important and integral part of action research projects.

Special readings and other useful resources are included as Appendices to this manual or as attached resources. Such resources include past student reports and a video about the project produced by some past participating students.

Feedback and comments about the content, structure and presentation of the manual are gratefully welcomed. In the best tradition of action research, we are willing to learn from the experiences of participating schools to improve on the quality and quantity of support provided in this manual.

The SARUA manual was initially researched and prepared by Bill Atweh and Louise Dornan at the Faculty of Education, QUT. This third edition includes minor updates and revisions but remains substantively the same. We intend to maintain continual revision of the document and to make updated sections available where necessary from time to time.

For further information about the project, comments and copies of this manual, please contact Derek Bland, Q-Step Program Coordinator, QUT - Kelvin Grove Campus, Victoria Park Road, KELVIN GROVE, Qld 4059. Phone (07) 3864 3731.

1. ACCESS TO UNIVERSITY: WHAT DO WE KNOW?

In a wide ranging review of research on patterns of participation in Australian post-secondary education, Anderson and Vervoorn (1983, p.1) presented the following caricature of a university student:

He's the son of a doctor, lawyer, or someone else with a house in Saint Ives or Kew. Because his parents wanted to have the best education money could buy they sent him to a private school, to study academic subjects and learn the importance of not getting his hands dirty. He went direct from school to college, avoiding the real world en route except for glimpses through the windscreen of the sports car his parents bought him. After a few years he too becomes a doctor or lawyer, and so begins to accumulate the money necessary to build a house larger than his father's and to send his children to university.

Although conceding that, like all caricatures, it was simplifying a complex picture and exaggerating some of its features, Anderson and Vervoorn argued that the results of the different studies reviewed presented a picture not far from the caricature. Barry Jones (1982, p. 157), the ex- Labour Federal Minister for Science, describes the situation in the following way:

The educational and occupational futures of most Australian children can still be predicted with a high degree of accuracy by asking only three questions: Where do you live? What school do you go to? What do your parents do?

The (DEET, 1990) national equity policy for higher education, "A Fair Chance For All", identified the following groups as most under-represented in higher education:

- people from socio-economically disadvantaged backgrounds;
- females (in non-traditional and post-graduate studies);
- some non-English speaking background groups;
- Aborigines and Torres Strait Islanders;
- people with disability; and
- people from rural and geographically isolated areas.

Six years later, the National Board of Employment, Education and Training reviewed the situation and stated that "it is time to embark on a deeper examination of the reasons why some inequalities in participation and outcomes still exist in higher education in spite of the significant efforts of universities to redress the symptoms of disadvantage..." (1996, p. ix)

The positioning of these disadvantaged groups within our educational system does not occur randomly or as the result of personal traits, but is the product of sociological and historical factors. This inequity has its foundations in the very basis of our society and education systems and starts in the pre- and primary schools. By the time a student from a disadvantaged background has reached secondary level they have experienced qualitative and quantitative differences in education in regard to retention to year 12, academic performance, type of school attended and involvement in tertiary participation (Henry, Knight, Lingard, Taylor, 1988; Yates, 1993).

For the majority of people, the opportunity to obtain a university qualification is an opportunity to gain greater access to economic and social benefits available in our society. Lack of participation results in the restriction of employment opportunities, leading to a trans-generational pattern of economic and societal disadvantage. Schools in our society play a crucial role in constructing and legitimising inequality, but also have the potential to reconstruct patterns of access to, and participation in, higher education.

The following sections outline some major issues identified from the literature on some of the under-represented groups.

1.1 Socio-economic Disadvantage

Socio-economic disadvantage represents "the most pervasive element of disadvantage" (Postle, Clarke, Skuja, Bull, Batorowiz, McCann, 1997, p. 85) in regards to access and participation in higher education. It is regarded as a major contributor to disadvantage in all of the other target groups listed below.

- Differences in participation come about because higher status families promote higher levels of achievement and provide higher levels of psychological support for their offspring to continue on in education. This reflects differences in the value placed on higher education, a value translated into individual achievement and/or moral support for the adolescent's decision to defer joining the labour force, and defer the income a job provides, for the higher pleasures and an extended education (Williams, Long, Carpenter, & Hayden, 1993a, p. 41).
- Low income effects under-representation in many ways: material effects (income, ability to support a student, the need to earn money as soon as possible, transport and living needs); environmental effects (both physical and social, a quiet place to study, access to resources); psychological effects (value of education, role models, familiarity with culture of the university); economic effects (no productive assets or marketable credentials to fall back on); and cultural marginalisation (Connell, Johnston, & White, 1991, p. 24-25).

1.2 Indigenous Australians

- Indigenous Australians live in diverse cultures - hence contextual factors such as geographical location, socio-economic status and gender may compound systemic educational disadvantage. Overall, Aborigines and Torres Strait Islanders have been identified as the most disadvantaged group in Australian society in terms of their participation in the labour market and education (DEET, 1990, p. 21).
- The retention rate of Indigenous students up to grade 10 is 75% compared to 100% of non-Indigenous students, and in grade 12 retention drops to 25% compared to 76% of the non-Indigenous population (Baumgart, Halse, Philip, Astor, & Power, 1995, p. 13). Retention is higher among females than males. Although access rates to higher education have improved dramatically in recent years, retention and success rates are relatively poor compared with other target groups.

- Indigenous Australian students have a strong sense of identity and self esteem within their own communities, yet at school they can feel devalued and develop a lack of self confidence, self esteem and often become underachievers.
- Educational provisions for Indigenous Australian students need to be enhanced with greater participation from their community.

1.3 Gender

- There still exists a shortage of female students in some courses (mathematics/science based, non-traditional courses and post-graduate courses).
- Some reasons for the under-representation relate to “lack of adequate child care, lack of science and mathematics background and lack of information on employment opportunities” (DEET, 1990, p. 28).
- Female students can have lower levels of academic self-confidence and parental support than do males. There are also differences in "prevailing social norms about the appropriate roles for women vis a vis family formation, child-bearing and participation in the workforce" (Williams, et al., 1993a, p. 31).
- Styles of masculinity and femininity are class based. Working class females can be caught in a complex web of factors including low self-esteem, high unemployment, poverty, and inter-generational patterns of early marriage and child-bearing (Penelope Williams, et al. 1991, p 50; Connell et al. 1982).

1.4 Non-English Speaking Backgrounds

- Patterns of participation in higher education vary by cultural/national group, gender, socio-economic status, differences between first and second generation residents, and immigrant and refugee status (DEET, 1990, p. 36).
- Although the position of this group has improved in recent years, NESB students are still under-represented in Arts, Education and Law (NBEET, 1994, p. 36). There is a need for localised research on specific communities.

1.5 Rural and Geographically Isolated Areas

- People from rural and geographically isolated areas have low rates of access to university and are disadvantaged in terms of participation patterns in different courses (Volker, 1993).
- Schools which service these areas often lack effective career education, information resources and staff training in this area (Jones, 1993).
- The physical distance to a university may be a stumbling block for many students, however there are also cultural barriers to higher education including gender

stereotyping, limited aspiration and lack of experience with university culture (Woodberry, 1993). The cost of living and accommodation in particular are important factors (Postle et al, 1997, p. 164).

- There are fears that the recent drought crisis has further destabilised the prospects of some rural/remote students acquiring tertiary education due to financial and community stress (Lawrence, 1995).

1.6 People with a Disability

- This group is significantly under-represented in higher education, but owing to its diverse make-up, each case must be considered on an individual basis. There exists little data on this group as yet.
- Since the Disability Discrimination Act was passed in 1992, access is now a legislative responsibility for universities (Postle et al, 1997, p. 162).

1.7 General Issues

- The traditional employment pathways for disadvantaged groups lie in vocational, practical and trade areas. Their economic positions within society confront them with the economic reality of accessing employment sooner rather than later (Abbott-Chapman, Hughes, & Wyld, 1991, p. 38). These patterns often are translated into perceptions in the minds of teachers and school administrators that these students lack either motivation or the ability to pursue higher education. These perceptions often lead to schools emphasising non-academic subjects, which would, in turn, limit the opportunity for these students to pursue further studies. Decisive intervention is needed to break this cycle of lack of participation in higher education.
- Schools from under-represented groups need more information about higher education than is currently available. In particular, students need extensive counseling and information regarding career choices, subject choices and higher education well before they reach year 12 (Parker, Bornholt, Harmon, Ball, Scott, & Cooney, 1993, p. 87). However, this information is not sufficient by itself. Other important factors including social and psychological support and encouragement is needed for these students to embrace the culture of the university which in many cases is foreign to their own home culture (Williams et al 1993b: p. 54).
- It is important to understand that educational failure is often a social problem, not a personal failure - it is a system's failure, not the students' faults. Institutions, both schools and universities, need to react to solve the social problems caused by under-representation.
- Not all under-represented groups have the same needs. Each school community has its own collection of individual cultures and backgrounds and must identify its own target groups. Each group experiences disadvantage differently: students from these under-represented groups are in the best position to investigate their conditions and to suggest ways to change them.

- In acknowledging that the culture of the student and their schools may be different from the culture of the university and higher education one should take care not to regard the culture of the student as deficient or lacking. Students and their community should have the opportunity to increase their knowledge of, and regard for, their home culture at the same time that they are gaining entry to the new culture.

2. ALL ABOUT SARUA

2.1 Aims of the Project

The overall aim of SARUA is to increase the participation of under-represented groups in higher education. To achieve this, a SARUA project seeks to:

- investigate factors preventing students from under-represented groups accessing higher education;
- plan and perform action needed to bridge the gap between schools and universities; and
- develop collaborative school and community based projects between students, school staff, and universities working towards the goal of increasing the participation of under-represented students.

Hence, SARUA is committed to promoting school-based projects that have the following characteristics:

- The project is a collaborative work between university staff, school staff, students and their communities, working together to solve the problem of inequity in access and participation in higher education.
- The project aims to develop students' knowledge and interest about university at the same time as they are developing some of the skills required at tertiary level.
- The project is balanced between research and action, based on the students' as well as the communities' own concerns and needs.
- At every stage of the project students are involved in the decisions effecting the running of this project in the schools.

2.2 Benefits to the Schools, Teachers and Students

It is hoped that communities engaged in a SARUA school-based project will benefit in several ways:

- *Schools* should see an increase in the number of their students considering and attempting university study, hence fulfilling one of their functions and increasing their status and reputation in the community.
- *Students* will gain leadership, research and social skills from participating, as well as learning more about the functions and structures of universities.

- *Students* engaged in the project will be able to disseminate information about universities to other students in the school, both formally and informally.
- *Teachers* involved will gain skills relating to action research and the satisfaction of positively contributing to the enrichment of their students' lives.
- *Students, staff and communities* can help to identify and change elements in the culture of their school that may be oppositional to promoting tertiary study.

2.3 Roles of Participants

2.3.1 The Role of the School

The active support of the school's administration is vital for the success of SARUA projects. This support may be in the form of time-tabling student/coordinator meetings for 1-2 lessons per week. Experience has shown that the project is much more successful in schools where the project is scheduled into the timetable and the coordinator given extra time to administer it. SARUA projects need not be too demanding on the financial resources of the school although some assistance in photocopying, postage and telecommunication may be needed.

2.3.2 The Role of the Coordinator

SARUA projects function best under the leadership of a member of the school staff. While it is preferable to have one member of staff as school project coordinator, the assistance and support of other school staff with specific skills should be encouraged. The role of this coordinator includes overseeing the selection, training and deliberations of the students within the school setting. The coordinator should be an enthusiastic motivator and willing to provide leadership in the following areas: planning, conduct and documentation of research or other activities; developing and maintaining group dynamics; providing a role model in terms of organisational skills; sharing his/her personal knowledge of university culture, structures, and alternative pathways available for students. The coordinator should also act as a liaison person between the school and the university or other external resource people for the project.

2.3.3 The Role of the Students

Participating students play central roles in SARUA projects. They will be expected to engage in activities designed for initial training and planning as well as activities such as generating research questions, planning of research and activities, collecting data, analysing and report writing. They should be committed to the aims of the project and be willing to commit their time and energy for the duration of the project. This may involve 1-2 days of initial training and planning followed by weekly group meetings of 1-2 lessons duration. They should be committed to working in group situations and to seeing that the benefits from the project flow to other students in their community.

2.3.4 The Role of the External Collaborators

It is useful to involve people from outside the school in the project. Some school projects in the past have received valuable help from staff of local higher education institutions, District Offices etc. (Most universities have staff or programs that are committed to the achievement of equity in education.) These external collaborators can be particularly helpful for initial training and planning, sources of guest speakers, and facilitating visits to

the universities. Also, some school projects were able to attract some funds from community groups in their local area. Some contact organisations that may provide useful resource people are found in the Appendices.

2.4 Participants' Experiences in Past SARUA Projects

2.4.1 One Coordinator's Experience

My involvement with SARUA began in 1992 as a teacher at a socio-economically disadvantaged school (also with a high enrolment of Non-English Speaking Background students and Aboriginal students and Torres Strait Islander students). The sociology of the student body was such that university was seen as neither a realistic nor a desirable pathway for the majority of students. Academically achieving students were often marginalised by their peers; no students had entered university for the previous 2 years and very few applied.

In 1992 Bill Atweh from QUT approached the school, looking for interest for SARUA and we eagerly accepted, supplying nine senior volunteers. After initial training at QUT in action research methodology and general social issues we generated several hypotheses regarding our community's lack of participation in higher education. We then decided to research our environment in order to ensure our assumptions were correct. At the end of that year, based on our research findings and conclusions, we compiled a list of recommendations for action, to help change the culture of the school. In the following year we took on a number of new students, they were initiated into the project's ethos and methodology by the now year 12s and some of the recommendations for action were enacted.

The students formed groups to work on their preferred recommendation/action - some groups even conducted additional research and then began new or modified projects. Some of our activities included:

- **A Buddy System**

Finding - Year 8 students did not know anything about university and did not have any role models who had attended university.

Recommendation and action - University students were matched with small groups of year 8 students and conducted activities at school. Later, year 8 students visited the university.

- **Homework Centres (in 1993 and 1995)**

Finding - homework completion rates were very low.

Recommendation and action - The library was opened after hours two afternoons per week. In 1993 volunteer teachers and senior students acted as tutors. In 1995, Year 8 students were mentored by senior students (SARUA students and volunteers) one afternoon per week for two terms.

- **Tertiary Shadowing**

Finding - most students didn't know what a university is like.

Recommendation and action - SARUA arranged for university tours. Both general (up to 20 students visiting different campuses) and specific (up to five students, visiting a single faculty) tours were arranged. The visiting students toured the campus of the university and met lecturers and tertiary students. With the help of the

guidance officer, SARUA students also set up a stall listing local universities and their courses during subject selection day.

In my experience, important factors in the project's successes include:

- being aware of the complicated dynamics between the students/students, students/myself. Maintaining positive relations inter and intra groups was an important concern in some years, as was my relationship with some individuals;
- time allocated for the SARUA project to meet during school. The project was most successful when we had 1-2 lessons (and the coordinator freed up for similar time). The one year this did not occur was a stressful and overall unfruitful year;
- student ownership of the project is important. My role was that of a facilitator and I was aware that I was in every sense a co-learner;
- timing was essential - it is useful to be aware of the time constraints on students and teacher. In their initial flush of enthusiasm it is easy for students to devise unmanageable projects. Also, begin right at the start of the year and aim to wind up by September/October before end of year burn-out;
- choose a variety of students with a gender, cultural/ ethnic mix. One of the joys of the project was, over time, seeing the students advocating for and supporting students with whom they usually never mixed. Being involved with this project made a world of difference to the students directly involved with the project . It also had a ripple effect through the rest of the school, most powerfully felt by the peer groups of the students involved. I have now watched several years of SARUA students apply for higher education and succeed, taking along with them their friends. Some of our ex-students who entered university became part of university based support groups for students from disadvantaged backgrounds. Our first graduates entered the workforce last year and some still visit the school for mentoring purposes, thus keeping the spirit of SARUA alive.

2.4.2 Students' Reflection on SARUA

- I gained personal knowledge, a head start from the rest of the people my age into university life.
- I used to think university was this monstrous place. I thought it was a really difficult place to get into, that the lecturers were these sort of people high up on a pedestal....I used to think how dreadful it would be....But....um, it's not like that at all, you're human too (directed to a lecturer). I thought that the lecturers got on really well with us....I felt comfortable at the university.
- What benefited me the most was learning research skills; learning about university life and all the positives and negatives about university; being able to learn about alternative entries into uni; and knowing that the report I have participated in will help future Polynesian students for years to come.

- This program increased my knowledge about uni, the guild, QSTEP [the special entry program for students from socio-economically disadvantaged backgrounds] and other entrance/acceptance worries. It helped me understand the reasons why people fail to continue their uni course - I discovered the reasons such as economics, travel etc. This would assist me in not dropping out myself because I am more prepared and know what uni is like.
- The project benefited my friends, the up and coming seniors and whatever. I think that I came out pretty good and I'm pleased with the result. I didn't think that I would be able to handle the work load ... but with a lot of time planning, you know, certain things set around certain times ... Yah, I did, and I was really pleased with myself. Well, looking at the first draft of the final report, I sat there looking at it thinking, "We couldn't have done this!". It was the biggest thrill to look at it and say "That is mine!"... It has boosted my self-esteem a lot. I'm very proud of myself for this and I feel very capable of undertaking a project so large, like, I'd be willing to do it again just to see if it would actually turn out like this again, but I feel very capable.
- I think it's got me to think of university more. 'Cause like, even six months ago I wanted to go to university but I didn't want to put the effort in to get good marks and I was only just sitting on "Sound". But now I've picked my grades up too, like, B's and A's and I surprised myself too. And my marks are getting better and my Dad's a lot happier and everybody is a lot happier. ... It's making me more confident about getting to the end of grade 12 and getting into university...And I really want to go now more than I thought I did.
- When I came here I just hung around the, you know, my people, the Vietnamese people, and I didn't really socialise with other people and I thought those people must be bad and all this. But now that I've done the survey there's heaps of people that (are) real nice.

3. SETTING UP A SARUA PROJECT

3.1 Overview of the Project Structure

Traditionally, in each year of its operations, a SARUA project has had a four-phase structure: (See figure 1)

<i>Phase 1</i>	Training & Planning	(roughly term 1)
<i>Phase 2</i>	Research	(roughly term 2)
<i>Phase 3</i>	Action	(roughly term 3 & ongoing)
<i>Phase 4</i>	Reflection & documentation	(roughly term 4)

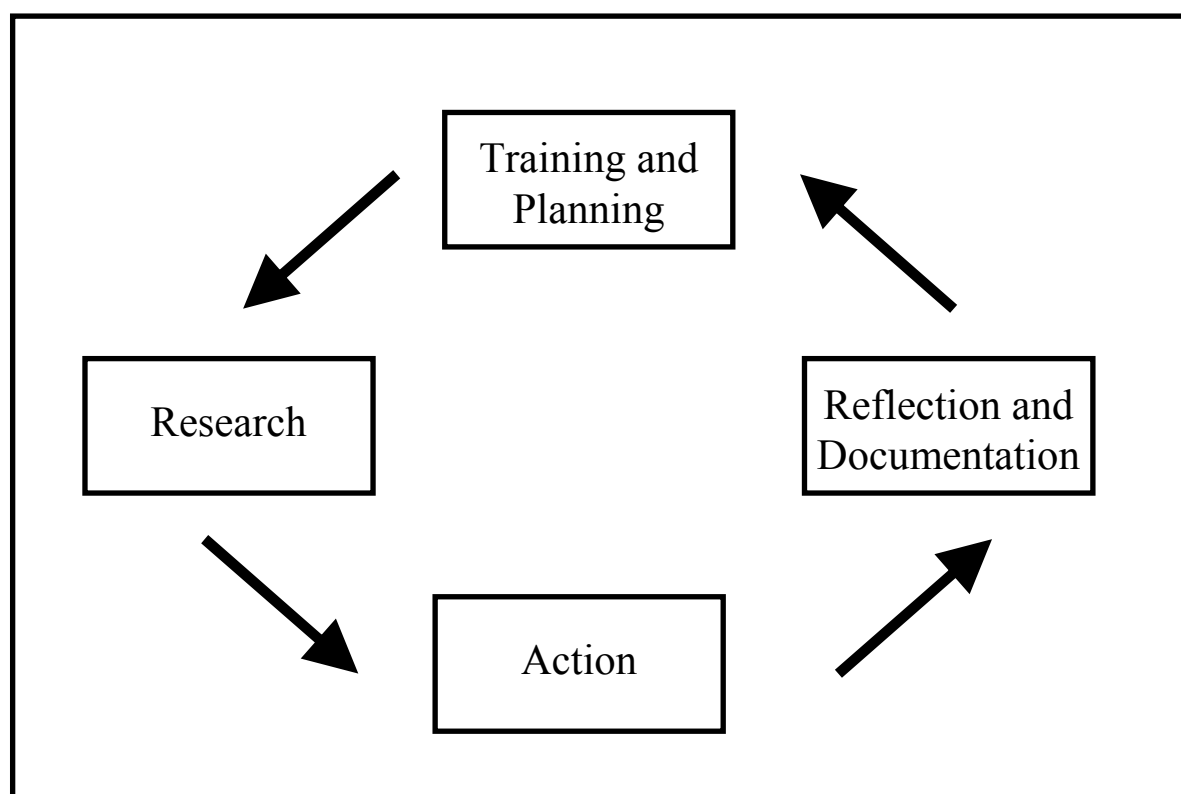


Figure 1: SARUA's four phase structure

Sections 4, 5, 6 and 7 of this manual explore the structure in more detail and give some helpful suggestions to help you set up your own project. This section discusses some general issues that can assist the coordinator in preparation for the project in their schools.

Two notes are important to keep in mind about the phases of the project:

- The emphasis placed on Phase 2 (Research) and Phase 3 (Action) varies from one year to another. Some years, the students may be primarily doing research activities. In other years they may be organising and implementing activities and perhaps carrying out research assessing their effectiveness.
- The project is carried out from one year to another. Thus the four phases should be regarded as one cycle in an ongoing spiral. That is the reflection and

documentation from one year informs the planning and training for the following year.

3.2 Understanding Action Research

There are many versions of action research. The version used in SARUA is often called Participatory Action Research (Kemmis & Carr, 1986). A copy of a pamphlet on action research developed by Yoland Wadsworth from the Action Research Issues Association is included as an extra resource in this manual. This section outlines the basic components of action research.

For many people action research is simply a cyclic design of research consisting of planning-action-reflection-replanning. While this is a valid description of many action research projects, it is much more than a method of data collection and analysis. It is research activity that is developed on certain principles. While traditional research is usually more concerned with knowledge generation rather than knowledge use, action research targets a certain practice and attempts to investigate that practice in order to change it. It is a research that combines knowledge (theory) stemming from a practice and changes to the practice itself. In the case of SARUA, studying the factors that effect participation in higher education informs the type of activities that are required to change school and personal conditions to increase the participation of students from targeted populations.

Kemmis (1994) has identified the following characteristics of action research:

1. *Action research is a social process:* it deliberately explores the relationship between *the realms of the individual and the social*. It recognises that "no individuation is possible without socialisation, and no socialisation is possible without individuation" (Habermas, 1992b, p.26), and that the processes of individuation and socialisation continue to shape individuals and social relationships in all the settings in which we find ourselves. Action research is a process followed in research in settings like those of education and community development, when people - individually and collectively - try to understand how they are formed and re-formed as individuals, and in relation to one another, in a variety of settings - for example, when teachers work together, or with students, to improve processes of teaching and learning in the classroom.
2. *It is participatory:* it engages people in examining their *knowledge* (understandings, skills and values) and interpretive categories (the ways they interpret themselves and their action in the social and material world). It is a process in which each individual in a group tries to get a handle on the ways their knowledge shapes their sense of identity and agency, and to reflect critically on how their present knowledge frames and constrains their action. It is also participatory in the sense that people can only do action research "on" themselves - individually or collectively. It is *not* research done "on" others.
3. *It is practical and collaborative:* it engages people in examining the *acts*, which link them with others in social interaction. It is a process in which people explore their acts of communication, production and social organisation, and try to explore

how to improve their interactions by changing the acts that constitute them - to reduce the extent to which participants experience these interactions (and their longer-term consequences) as irrational, unproductive (or inefficient), unjust, and/or unsatisfying (alienating). Action researchers aim to work together in reconstructing their social interactions by reconstructing the acts that constitute them.

4. *It is emancipatory*: it aims to help people recover, and release themselves from, the constraints of irrational, unproductive, unjust, and unsatisfying *social structures* which limit their self-development and self-determination. It is a process in which people explore the ways in which their practices are shaped and constrained by wider social (cultural, economic and political) structures, and consider whether they can intervene to release themselves from these constraints - or, if they can't release themselves from these constraints, how best to work within and around them to minimise the extent to which they contribute to irrationality, unproductivity (inefficiency), injustice, and dissatisfactions (alienation) as people whose work and lives contribute to the structuring of a shared social life.
5. *It is critical*: it aims to help people recover, and release themselves from, the constraints embedded in the *social media* through which they interact: their language (discourses), their modes of work, and the social relationships of power (in which they experience affiliation and difference, inclusion and exclusion - relationships in which, grammatically speaking, they interact with others in the third, second or first person). It is a process in which people deliberately set out to contest and to reconstitute irrational, unproductive (or inefficient), unjust, and/or unsatisfying (alienating) ways of interpreting and describing their world (language/discourses), ways of working (work), and ways of relating to others (power).
6. *It is recursive (reflexive, dialectical)*: it aims to help people to investigate reality in order to change it (Orlando Fals Borda, 1979), and to change reality in order to investigate it - in particular by changing their practices through a spiral of cycles of critical and self-critical action and reflection, as a deliberate social process designed to help them learn more about (and theorise) their practices, their knowledge of their practices, the social structures which constrain their practices, and the social media in which their practices are expressed and realised. It is a process of learning by doing - and learning with others by changing the ways they interact in a shared social world in which, for better or for worse, we live with the consequences of one another's actions.

3.3 Selecting the Students

Before you start your recruitment, you need to publicise your project. Create interest in SARUA by introducing it in different forums and through different media (ie, posters, school newsletters, school notices, staff meetings, school parades and form class meetings). You may also need to talk to groups of students about it and approach individuals and small groups that you, or other staff, think may be interested in the project. If you have special requirements from the students (eg, ability, background, year level) you may need to announce them now.

This initial publicity will always attract quite a number of students especially those who are interested in learning about university for themselves. Once they have identified themselves you can explain the project in more detail, including aims, benefits, roles and commitments. You may want to ask interested students to formally apply by filling in a nomination form, listing pertinent details. (It may be useful to make out a criteria list for selection beforehand to ensure there are no accusations of favouritism.) You will then need to short list those who you think will be most suitable, although some will drop out of their own accord. The criteria and selection procedure will obviously differ for each school involved, however, we include here some guidelines.

- Identify the target groups. Schools will select their own target groups according to the characteristics of their feeder communities. Some schools like to work with homogenous groups consisting of students from similar backgrounds. Other schools like to have mixed groups. For example, one school with a mixed group of SARUA students identified that its Polynesian population may have special issues to deal with - the Principal expressed special interest in those students and 6 of them took part in the project as a separate group.
- Set the number of participants that you wish to have. While there is no set number of participants that a group may have, you may want to avoid too small or too large numbers of students in one group. Normally groups with 5-8 students work best. Smaller groups are unstable if students drop out, larger groups are too difficult to administer and reach consensus. Experienced coordinators in the past have been able to split up larger numbers of students into smaller groups working on different tasks. Inexperienced coordinators may need to recruit other staff in the school to assist in the coordination of multiple groups.
- Select the level(s) of students. This project works best with students from grade 11 and 12, while some more mature grade 10 students may be able to successfully participate. It is best to have a mix of grade 11 and 12 in approximately equal numbers. This allows for some continuation in the project from one year to another, with grade 11 students continuing to grade 12 and a new group from grade 11 joining next year. However, mixed level groups are more difficult to timetable in one period. You may need to discuss this with the school administration.
- Favour socially minded students. Students selected for such a project need to be self-interested (to learn more about university for themselves) but they also need to exhibit a desire to help their wider school community. Students who are only “in it for themselves” tend to create discord amongst the group - once their own needs are fulfilled they don’t pull their weight and the other students eventually resent this.
- Choose students with adequate academic performance. Since the tasks expected of the participating students demand high cognitive ability, it is important to select students who show the potential to successfully carry out these tasks. There is a moral responsibility not to select students who are likely to fail in the task and thus reinforce the sense of failure in these students. Further, you need to ask: Are these

students realistic candidates for university entry? But remember that university entry these days does not depend on school marks or board subjects alone!

- Choose students who show commitment to the aims and demands of the project. Selected students should know exactly what type of activities they will be involved in and the time commitments expected of them. Maybe you need to seek advice from other teachers about the level of commitment of the selected students and their involvement in other extra-curricular activities.
- Obtaining parents' permission is very important for this project. On one hand this permission provides some legal cover for you and the school. On the other hand correspondence with parents is a good initial step to get them to know about the project and its aims, and to prepare the ground for future support from them if needed. A copy of a sample letter to parents and students informing them about the project is found in the Appendices. In dealing with racial and ethnic groups, co-operating with the community leaders may be appropriate and advantageous.

3.4 Developing Networks for the Project

It is important to develop a whole school/community approach to this project. The support of the school administration to the project is essential for achieving its purposes. You may want to develop a regular means of informing the administrators on the progress of, and any difficulties encountered in, the project. Support of other teachers is also very helpful. Keep other staff informed about the project through notices and meetings. It may be appropriate that students participating in the project receive some credit for their assessment in the various subjects in areas related to this project. For example, the documentation generated in this project may be used for assessment in language or social studies subjects. Further, keeping the parents and community leaders involved and informed has been stressed above.

The use of the school newsletter is helpful to keep the issues raised by this project on the school community's agenda. Finally, several of the previous groups of SARUA students have written articles to the local community press about the project. Such publicity assists to advertise the activity of your school but also acknowledges the achievement of your students.

3.5 Developing and Maintaining Group Work

One of the main features of this project is that it is based on cooperative team work. Working in groups means students are able to divide tasks, making best use of collective skills. Although there are many benefits in team work, there can be problems and moments of real conflict. Do not assume that students can work in groups effectively - most of their school work has been competitive and individualistic. Some problematic issues which have arisen in the past include:

- conflicts of ideas/priorities/personalities
- students doing unequal amounts of work
- differences in preferred working styles of students

- traditional gender roles.

These issues are best handled as they arise within the context of the project. It pays to be alert to these difficulties and to be ready to deal with them - conflict needs to be addressed very early in the project. The Appendices contain activities to develop group work. You may want to try some early in the project as they include strategies for managing group situations. Also you may want to enlist the assistance of other teachers in the school who have more experience in this regard. Keeping in the spirit of this project, remember that the students themselves may be in the best position to suggest solutions to conflict and to negotiate these solutions with each other.

3.6 Regular School Meetings

It is important for the project and for the students to have regular meetings to achieve the activities agreed on at the start of the project. It is best if the school can find time during the school day for the coordinators and the students to meet. Keeping the meetings as regular as possible also helps to induct the students into the disciplined culture of the university and workplace.

An important skill that students can learn while they are engaged in this project is that of agenda setting and taking and keeping notes/minutes of their meetings. This practice could prove particularly useful for the reflection and documentation phase of the project when students are recalling their steps during the year. Developing the practice of setting agendas for each meeting and taking notes is useful early in the project. The first few times you may want to model these skills for the students. In future meetings ask the students to take the responsibility themselves by taking turns in doing it. Insist on them typing the minutes and distributing them out at the start of the following meeting.

4. PHASE 1 - TRAINING AND PLANNING

SARUA projects always begin with what we call ‘training and planning’ sessions. Before the research and action phases can begin, students need to have an overview of what they are doing, and why, and to develop some skills needed for the task that they are committed to. Your school administration may allow 1-2 days out of school time or you might conduct it after school, on a weekend or holiday time or in your allocated class time for the project. (In the first five years of SARUA we conducted these days during the Easter school holidays. Both teachers and students volunteered their times for the project.)

Incorporated into the training phase are the following activities intended to:

- introduce the project in detail;
- increase the students’ knowledge about higher education options and requirements;
- explore general social issues relating to university access; and
- generate hypotheses/plans to inform your research/action.

4.1 Introduction to the Project

The first step here should be to *orient students* to the project in more detail. Each student can be given a folder with photocopied parts of Sections 1 and 2 of this manual (ie, the aims, benefits, roles, structure etc.). Other sections related to research and documentation may be given later when they are needed.

Examples of some students’ work from the past years of SARUA could be shared with the students. Included in this manual is a *video - Bridging the Gap*, produced in 1994 by Year 11 and 12 students from Inala State High School. It tells the story of how the project worked at that time in that school. It is worthwhile as an orientation for beginning SARUA students. Also included in this kit are some *reports* that have been compiled by SARUA students in the past. Although your project will obviously differ from these exemplars, it is useful to show students the documentation of completed (and some of them still ongoing) projects.

Introduction to action research. Students involved in this project should be aware of its design and basic assumptions. For example, the cyclic structure of the project is based on action research methodology and this could be explained in simple terms with the help of the diagram from Section 3.1, on the discussion in Section 3.2 or some of the readings in the Appendices or bibliography.

Setting up team spirit. This is an important time to establish a cooperative relationship with and between the students and set up your role as co-learner and facilitator. As indicated in Section 3.5, the Appendices have further information as to how this can be done from the start.

4.2 Increasing Knowledge about Higher Education

In general students engaged in this project have very limited knowledge of the structures and cultures of universities. It may be useful to organise a couple of visits to local

universities for the SARUA students, or at least a visit to the school by people with considerable information about the university. Current university students are excellent resources to utilise. If distance is an issue, some creative alternatives may have to be employed such as accessing the internet or obtaining other promotional material from the university (some universities have their own interactive CD Roms). Other ideas include inviting guest speakers such as Guidance Officers (complete with a plethora of handbooks and pamphlets) or local university graduates. It would be useful to have extended visits to a university where students can join in the atmosphere of the campus and participate in many of its day to day activities. (We have always found it advantageous to have the full initial training and planning conducted at the university.)

In particular, students may need to know about the following:

- the differences between schools, TAFE and universities;
- terms such as faculty, course, dean, lecture, tutorial etc.;
- courses, certificates, diplomas and degrees, graduate and postgraduate, etc.;
- entry requirements and alternative entry;
- costs, fees and available financial assistance such as Youth Allowance, Austudy and ABSTUDY; and
- work loads and study habits (lectures and tutorials).

4.3 Social Issues Related to University Access

A few students will have quite an enlightened understanding of issues relating to university access and social disadvantage. However, others will either not be aware of these issues, or could take a “blaming the victim” approach (ie, “Students from schools like ours don’t go to university because they’re too lazy”). Therefore, it is necessary to tease out the many social reasons why students from certain groupings in society do not aspire, or gain entry, to tertiary institutions while students from other social groups do so in large numbers.

We have included a limited discussion of some of the issues identified from the literature on university access and disadvantage in Section 1 of this manual. Further readings are found in the appendices. These readings are not intended to be “taught” to the students. This project is planned so that students form their own hypotheses and test them as they apply to their local context.

This part of the program allows the students to start their thinking about these factors. In the past we have found that students are capable of isolating several of the issues identified by professional researchers as reasons for the under-representation of students from certain backgrounds. These thoughts will lead in future sessions to isolating the specific research questions investigated by the students in their projects.

Social Issues Related to University Access
(Brainstorming Activity)

Aim:

- to identify issues and factors related to access to and participation in higher education; and
- to form the basis for the action/research conducted by the student.

You will need:

- Personal writing paper and pens; and
- writing materials and implements for group viewing (ie, butchers paper and felt pens; or blackboard and chalk; or overhead transparencies and writing pens).

Procedures:

1. State your problem clearly. (eg, Why don't some groups in our society go to university as much as others? You could further limit this in terms of gender, ethnicity, race, socio-economic disadvantage, rural location etc.). Write the question down so that all the group can see it.
2. Each participant should think of as many aspects of the problem as they can, by themselves, and write them down on their individual papers. Encourage students to think about the reasons why fellow students are not interested in higher education.
3. Depending on the number of participants, regroup the students into groups of 3-5 students each. Each group will collate their answers on butcher's paper. Allow for some discussion within the small groups and get them to select a recorder and spokesperson.
4. Come back into the larger group and record one reason per group on the blackboard or on clean butchers' paper until all have finished. As you are writing the answers, group similar reasons together on different regions of the board without labeling the categories. You will end up with categories, which stand for social, economic, gender, isolation, historical, personal etc. There will be no criticism/discussion allowed during this phase. Allow additional reasons to be nominated from the floor.
5. At the end, attempt to label the categories obtained and discuss the students' views about the relevant importance of these reasons presented.

If it is possible, type the ideas and distribute to students before further planning. These reasons can form the basis for future project plans.

If time allows, this activity can be accompanied by a similar brainstorming activity on the social issues that teenagers from the students' particular background encounter in today's society (eg, living in a low SES suburb or being of a certain ethnic or racial group, etc.).

Note: for projects in their second or later years of operation.

It would be very useful to have students look closely at the findings, conclusions and recommendations from the reports developed by students from previous years. A basic principle of action research is that the reflection of one cycle of the project should inform the planning of future cycles. Students need not be restricted in their ideas for further

action and research by the previous year's recommendations, however they need to critically consider them.

The activity below may be of use for this situation.

Previous Years' Reports

Aim:

- to review knowledge and recommendations generated from previous years' activities in the project in order to form the basis for this year's project.

You will need:

- a few copies of the previous years' reports; and
- one photocopy of the major recommendations from these reports for every student.

Procedure:

1. If you have some students from the previous year's project, invite them to make a short presentation on the previous year's report. They need to stress the rationale of their action, their activities and research conducted, their findings and results, and their recommendations.
2. If students from last year are not available to make the presentations, divide the current year's students into small groups to read sections of the report and summarise some of the most important points. These small groups can make presentations to the whole group.
3. Alternatively, the coordinator can highlight the most important aspects of the project from last year and share them with the students. (It would be useful for every student to have their own copy of the recommendations from the previous year for their folder.)

4.4 Generating Issues/Hypotheses to Inform Your Action/Research

The activities in the previous sessions will have allowed the students to generate an understanding of the multiplicity of factors involved in the wider social context of disadvantage and access to tertiary education. Now it is time to consider the students' own community and explore some local dimensions of this problem. Once some local barriers have been identified by the students, they can set their sights on researching them and attempting to redress the situation.

Step 1: Describing "Our Situation".

(This activity has been modified from Daws et al, 1994)

Our Situation - Identifying Barriers to Higher Education in our School *(Basic Problem Solving)*

Aim:

to identify issues of importance to the local context of the school or community.

You will need:

- an "Our Situation" worksheet; blank butchers' paper or blackboard; and
- Guidance/Career Officer as a guest speaker (optional)

In this activity you can refer the students to the list generated by the brainstorming activity on Social Issues Related to University Access and/or the considerations of the past students' reports.

Procedures:

1. Divide the whole group into groups of 3-5 students. Hand out the "Our Situation" worksheet (*see below*).
2. Dream about "The Ideal Situation - access to higher education in our school". Write it on the right hand side of your worksheet.
3. Describe "The Present Situation - access to higher education in our school". Write it down on the left hand side of your worksheet.
4. Now brainstorm to fill in the middle section relating to barriers: "What stands in the way of the ideal situation being realised?"
5. Allow time for the small groups to share their findings with the whole group. As they are doing this you may want to summarise their suggestions from the middle column on the blackboard by grouping similar suggestions together and naming the emerging categories.
6. If a guidance officer is available they can share their experiences and knowledge in the area by suggesting areas for research/action.

Worksheet For Step 1

OUR SITUATION Identifying Barriers to Higher Education in Our School		
The Present Situation Access to higher education in our school	What Stands in the Way Barriers	The Ideal Situation Access to higher education in our school

Alternative Procedure: Barriers to Higher Education in Our School

In small groups, let the students design a poster identifying the problems of access to university from your school. Identify what you know about the problem and what you do not know. Identify things that can change and things that are a little harder to change (Include some ideas from Exploring General Social Issues Relating to University Access - Section 4.3). Encourage students to be creative in their poster design by drawing a diagram/picture etc. Allow time for the various subgroups to explain their poster to the rest of the group and record emerging suggestions for research/action on the board as above.

Step 2: Identifying a limited number of issues/hypotheses for action/research

You have now identified some barriers to higher education in your local context. The next step is to decide on a limited number of issues you would like to act upon, or identify some unknown facts about your context that you would like to research further. This is a very important part of the process and potentially quite divisive for the group as different students have their own interests and group loyalties. Depending on the resources of the group and the number of participants, the huge range of possibilities needs to be reduced to one or two ideas for projects. Strong negotiations may need to be carried out between the students in order to narrow down the possibilities for research/action to manageable few. In smaller groups this process may be achieved in informal discussion. In larger groups a more formalised procedure may be needed. You may need try the following activity.

Narrowing Down the Issues/Hypothesis Generation

Aim:

- to limit the number of possibilities for action/research

You will need:

- copies for each student of “My Preference for Action/Research in this Project” (*see Below*)
- blackboard or butchers’ paper

Procedure:

1. Each student is requested to fill in the following table nominating between 2 and 3 activities that he/she would be interested in doing this year and the reasons why this activity would be useful/important.
2. Students get together in a large group and share their ideas (without comments or discussion); the coordinator writes them on the board - leaving spaces between them so that similar ideas can go close to each other.
3. The ideas are then numbered 1 - N on the blackboard.
4. Students will take turns discussing the ideas on the board, stating which ones they like and which ones they do not like, stressing the reasons why. The coordinator can add these comment on the board. Some students may withdraw some of their own suggestions from the floor if they become interested in other ideas. In the vast majority of cases consensus is reached at this stage. In a few cases there may be a need to perform the following step.
5. Students should vote on the ideas by stating their first three choices from the options. They do so by writing the numbers of the options that they like best on a piece of paper. The papers are collected and tallied by the coordinator. Least popular choices are eliminated. This is repeated until a consensus is reached. It may be appropriate to maintain group harmony by deciding on more than activity, provided sufficient number of students are willing to participate in each. Avoid single students working alone!

Worksheet for Step 2

My Preference for Action/Research in This Project	
It would be nice to do	because
1.	
2.	
3.	

Step 3. Project Action Plan for the Year

Once the group decides on the project for action/research they need to plan their activities for the year. Filling in the following “Project Action Plan” sheet may be useful.

Project Action Plan	
Name of Group	
Names of Participants	
What is the problem we want to address?	
What are we going to do?	
Why is it important?	
What do we need in order to do it?	
Who else needs to be involved? (eg., for advice, research subjects, training etc.)	
When are we going to start? Timeline of activities including reflecting and documentation.	
Where are we going to do it?	

5. PHASE 2 - CONDUCTING RESEARCH

Your students should now have determined the issues that they want to address in their projects. They may have decided to do research as their main activity for the year or they may have decided to do a little research to better inform their action. Now you can begin your research phase.

Reasons why we do research include, to:

- make sure our issue is seen as being important by other people as well as us;
- find out as much as we can about the situation we are trying to change;
- make sure our action plans are focused on the right things;
- ensure that the action we take is appropriate; and
- raise the awareness of the people we are researching about the issues we are addressing.

(Daws, et al. 1994)

Research is a systematic activity to try to find out answers to questions. While this project is based on the belief that students can carry out meaningful and useful research, it also acknowledges that students need to be assisted in developing appropriate skills.

In general, a research activity needs to follow certain stages:

- deciding on specific research questions
- designing and implementing a plan
- analysing the data gathered; and
- documenting your findings.

This section deals with some points that are useful to keep in mind for each of the first four stages. Section 7 of the module deals with documentation.

5.1 Deciding on Specific Research Questions

The figure in Section 5.4 below illustrates three steps in refining research questions. The first step is to identify a research problem. This has already been done in the Training and Planning phase of this project. By this stage of conducting research, the students will attempt to identify specific research questions. These specific research questions should guide us into the development of the research instruments and selecting the subjects for the research discussed in the following stage.

For example, the basic issue you have decided to investigate may be the needs of Year 10 students: “We are interested in helping the year 10's widen their employment pathways - we want them to consider university before they start senior.” This may be translated into more specific questions such as:

- How much do year 10 students know about available university courses?
- How much do they know about differences between TAFE and university courses?

- What aspirations and plans do they have for careers and further studies? What do they base their aspirations upon? Who influences them in their decisions?
- Where do they get their information from about university and jobs?
- Do they need to know more about alternative entry to university?
- Do they think that they would benefit from a visit to the university? When would be the best time to do it? It is better to have someone from university to visit the school?

Remember that the more specific the research questions are, the more useful they will be in designing the instruments. Be sure that the questions are stated in a clear, unambiguous way and be sure that they are easy and practical to carry out. Include only questions that are useful for action; that is, avoid questions that simply “would be nice to know”.

A useful criteria to use to evaluate each research question is to subject it to two questions:

- Is this research question practical to investigate? That is, within our time and resource limitations, can we find out the answer to this question?
- Is it worthwhile to find out the answer to this question? That is, why do I need to know this? How would this information allow me to solve the problem identified?

5.2 Designing and Implementing a Plan

There are three things you need to do to design a plan for your research:

- Step 1: Selecting subjects, ie, people, to research
- Step 2: Selecting research instruments to gather your data
- Step 3: Selecting procedures to gather it easily

Step 1 - Selecting Subjects to Research

You do not need to study the whole school or community. In most cases it is fine to research a small sample of subjects from the population. While there is no magical rule that tells us how many subjects to study, the following considerations are useful to think about:

- The larger the sample the better information we get; however, the larger the sample, the harder and more expensive it is to obtain and analyse the data. Hence you must compromise between the quantity of information and the ease of making sense out of it. This is especially important if you have limited time to work on the project.
- Similarly, the type of research instrument that you have determines the subjects that you select. For example it would not be practical to interview all grade 10 students for your research, even though it is possible to have a questionnaire for each student. On the other hand, interviews may provide deeper knowledge than questionnaires.
(See the section on instrument selection below.)

To select the subjects you need to decide:

- Who am I going to study? (Students? Juniors or Seniors? Parents? Old students who left school? Old students who have gone to university?)
- How many subjects do I need? (All that are available? A smaller subset? One half? One tenth? As many as I can get?)

Students may be tempted to want to study the whole school population. Remember that sometimes it is better to investigate a more limited population in depth than a larger group in a shallow way.

Step 2 - Selecting Your Research Instruments

The next decision that you need to make is regarding the instruments that you want to use for data collection. Remember that you only have one school term to collect your data, so it must be capable of being created, implemented and analysed in one term.

The most common instruments that past students in this project have used are questionnaires and interviews. The appendices include sections on the advantages and disadvantages of each: consider their merits and decide which ones are the best for you. Or maybe you can do them in combination. For example you may want to send a questionnaire to the whole group of students and interview a few of them. The interview and questionnaire may be similar in this case, but they will include different forms of the same questions.

Developing a research instrument is a very important part of the project. Remember that often you do not have another chance to investigate the population again. The following procedure may be useful to follow to assure high quality instruments. After deciding on what instrument you want to use:

- Brainstorm as many questions as you can. You may also want to look at sample instruments used by previous research studies.
- Allow students to comment on each other's questions - students need to develop mutual trust to be critical friends for each other. Remember that even the most experienced researchers benefit from critiquing each others' work.
- Format the final instrument so that it is easy to read, and have clear instructions.
- Select a small group of students and give them the instrument and obtain feedback from them about the instrument. Modify the instrument as required before final use.

Things to include with each instrument:

- Remember that you need to inform your subjects about the aims of the study.
- You need to get their permission to participate and assure them about the confidentiality of the results.
- Do not forget to thank them at the end.

- Also remember to include some background information for each subject to fill in. This should be handled with care.
- Only ask questions that are relevant to the study's aims. For example, do not ask about someone's income unless you are interested in, for instance, the differences between high income families and low income families.
- Background factors that you may want to ask about include: gender, level of education, type of work that they do, family status, ethnic or racial origin, year level etc.

Step 3 - Selecting Procedures to Gather Data

After deciding on subjects and instruments, you need to design a plan of how to conduct the study and collect the data. The decisions that you may follow depend on the type of decisions you made in the above two steps. You need to make some of the following decisions.

- How am I going to get the subjects? Can I get the names from the school's office? How do I select the sample? Do I randomly select the sample? Do I let the students select themselves by asking for volunteers? Do I take every fifth subject? Do I take whole classes? Who can help me in locating the names of subjects?
- Can I send the questionnaire to parents through the newsletter? Do I use a special mail out?
- What information do I need to give to subjects about the project?
- Do I administer the questionnaire individually? Give it to the whole class? Let them fill it in their own time? Do I take class time?
- What do I need to record during the interview? Do I take notes? Can I tape record the interview? What do I need to do with the information obtained to prepare it for analysis? Would I conduct the interview by phone or in person? Can I ask the person to come to school or visit them myself? Do I have a one-to-one interview or a group interview?

5.3 Analysing the Data Gathered

Let us review the process of research. First the students have identified a research issue that they needed to investigate. This was translated into more specific research questions, which in turn gave rise to the final questions on the research instruments.

The process of analysis follows the reverse cycle. First we summarise the responses from the individual questions. This is called *findings*. Second we make statements about the research questions. These are called *conclusions*. Lastly we make statements about the research problem/issue that we are investigating. These are called *recommendations*. The following diagram illustrates this relationship of research design and research analysis.

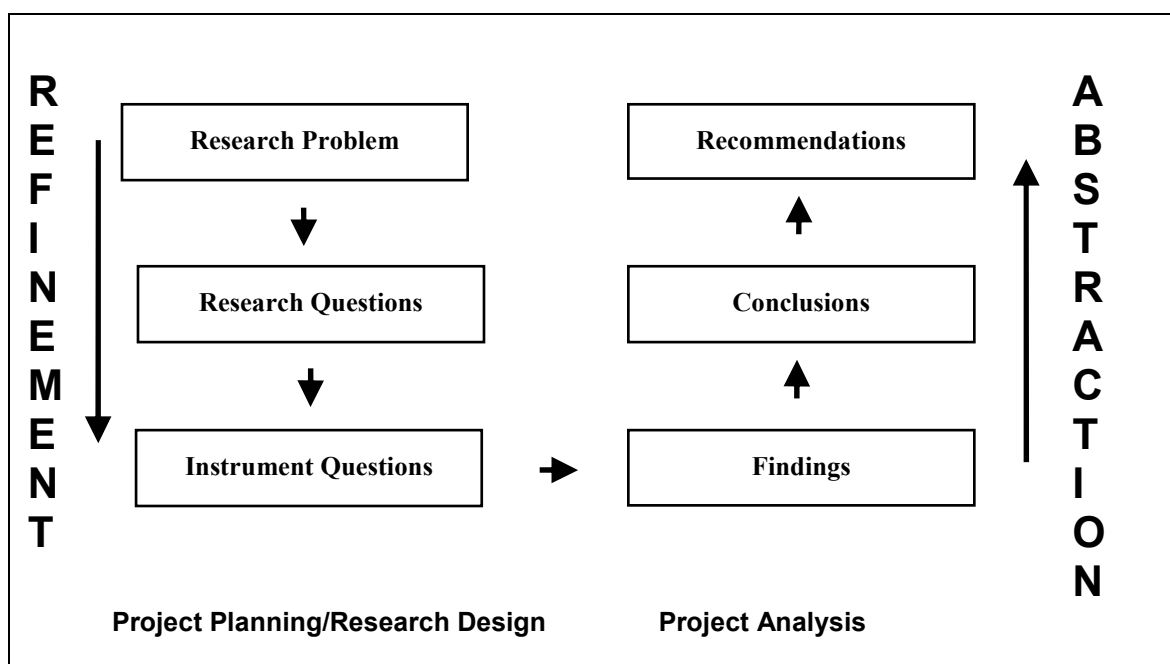


Figure 2: Research Design and Research Analysis

5.3.1 Findings

Summarising the data that you have collected is the first step in analysing it. In order to analyse correctly and to make accurate conclusions you must first summarise your subjects' responses question by question if you have used a questionnaire or theme by theme if you have used interviews. Below you will find some suggestions how to do this. Data could be presented in different ways depending on the type of information you are summarising: ie, description, tables, graphs, lists, anecdotes, percentages etc.

Summarising Closed Ended Questions

Depending on the number of subjects used in the research, you may want some advice on how to summarise your data. It is possible to do the analysis by hand for smaller samples and a small number of questions. Closed-ended questions are relatively easy to summarise. The best way to do it by hand is to have a big piece of paper (A3 size or butchers' paper). Tally the results by hand.

Consider the following example:

Year 8, 10 and 12 boys and girls were asked the following question:

When I finish school I plan to

- (A) Find a job
- (B) Go to TAFE
- (C) Go to university
- (D) Go on the dole
- (E) Other (Please specify) _____

You may want to create a table as follows to tally your results:

		(A)	(B)	(C)	(D)	(E)	Total
Grade 8	Females						
	Males						
Grade 10	Females						
	Males						
Grade 12	Females						
	Males						
Total							

This table allows you not only to get the total numbers of respondents in each group of students but also gives you the total for all males and females in the group and the total pattern for each grade as well. After obtaining the final numbers in each cell, you can calculate the percentages of responses for each group.

Note that a similar table can also be used to present the data in the final report.

Summarising Open-Ended Questions

There are no fixed rules that you can follow to summarise open-ended questions. Your task is to look for patterns in responses. The best way to proceed in this analysis is to read through the responses several times until you get a feel of the type of topics that people have dealt with. On the margin of the transcripts you can write few words to describe the issues raised. For example you may want to write the word “Finances” next to each section of the transcripts in which the person is talking about money matters. If you collate all the sections that relate to this issue from all responses, you can describe the feeling of the whole group or be able to describe the range of factors and opinions that they have discussed. Alternatively you may want to summarise the responses of each subject interviewed as a case study.

5.3.2 Conclusions

From here, the students can make some conclusions based on the findings. Conclusions are a little more general than findings. They are statements, based on the findings from the individual questions, but relate back to the research questions that were initially asked. For example the following are some conclusions that some students have found in their research:

(On Year 10 subject selection)

Based on these findings a small minority of students (15%) chose subjects related to their future employment. The majority of students (85%) chose subjects based on other considerations such as: the same subject as their friends, factors of difficulty or personal relationships with the teacher. It seems that the students are not selecting their subjects based on their plans for future employment and tertiary

study. This shows that students may not be making informed decisions when they choose their subjects in Year 10 going into senior. It could also mean that students do not realise the importance of subject selection in senior, have not planned or decided on future career paths, do not realise that some subjects are prerequisites for further study or don't care.

5.3.3 Recommendations

Now that students have made their analyses of their findings and conclusions, they can make a number of recommendations as to how they can attempt to change factors which act as barriers to access and participation to higher education for their peers. For example the following are some recommendations about year 10 students subject selection:

Based on these findings and conclusions, Year 10 students need to be made aware of the importance of choosing appropriate senior subject selection. We make the following recommendations to change this part of our school practices:

- we plan talks by the Guidance Officer, CES, university guests, and present and past students;
- each year 10 student should have a personal interview with the guidance officer and/or Heads of Department when choosing subjects for senior;
- that year 10 care class teachers need to talk to their classes about planning for their future employment;
- that we begin employment awareness in earlier grades; and
- that we involve parents in their students' decisions by hosting parent information evenings.

6. PHASE 3 - ACTION

You have identified an issue, researched it thoroughly, listed your findings, drawn conclusions and made some recommendations to change the outcomes. Now it's time to choose the most effective and manageable recommendations and put them into action. Remember that you may perform some action on the recommendations that you have obtained from this year's research or on recommendations from the previous year's findings. Students may want to generate ideas of their own as well.

The brainstorming activities in Section 4 identified some activities that the students may want to engage in. These activities were conducted at the beginning of the year. If you want to perform some activities in the middle of the year, you may want to revisit those activities now that you have done some research in that area which will better inform your action. In particular before starting the action, draw an action plan similar to the one found in Section 4. Keep in mind that the phases of research and action are cyclic. They can be done in any order and one leads to another.

In selecting your action keep the following points in mind:

- Choose activities that are practical in terms of your time and energy resources. Consider how many students you have and what resources are available.
- Students may want to seek external assistance in implementing some of these activities. Additional training may be required in some new skills that they may need for the activity (eg, formal telephone manners, formal; letter writing, etc.).
- The reports from past years are useful for some ideas. Look at the type of activities that past students have done in other schools and see if they are useful in your setting. The students may want to consult with other teachers or administrators from the school for further ideas.
- You are a collaborator in the project. While students need your help and leadership, remember that this is *their* project. Allow for their voices to be heard.
- The keeping of records of meetings is very important for this type of action. Review the notes on regular meetings in Section 3.6. Keeping minutes is very important for documenting the project and for keeping the action going.

7. PHASE 4 - REFLECTION AND DOCUMENTATION

An important part of action research is the reflection and documentation of what you have found out and what you have done. These are important for the following reasons:

- For the cycles of research and action to inform each other, careful reflection is essential. Remember the motto stated earlier: research that does not lead to action is impotent and action that is not based on research is ignorant.
- Documentation is important for sharing the learnings generated in this project with people outside the school and also for future projects within your school. Having access to your findings is also important for people making decisions about the running of your school.
- Students gain many skills in report writing. The skills are useful for university students and for many careers that they might seek.
- Students gain pride in having their names on a completed and published report. This may also be useful for their resume if they are seeking alternative entry to the university or in gaining employment.

7.1 Reflection

One of the principles on which this project is based is that the participants involved in the problem/situation are in the best position to study the situation, learn from it, and, hence, to change it. In order to do so effectively, participants need to develop the skill of reflecting on their actions and experiences. Effective reflection should be systematic and purposeful and can be developed and sharpened. It can be assisted by the maintaining of detailed notes and minutes from meetings and keeping a record of all correspondences and publications from the project. It can also be assisted by conducting brainstorming sessions. Note that the brainstorming model encouraged in this manual always commences in personal reflection and then allows for sharing thoughts with others in the group.

Keep in mind that reflection can be on both:

- a) what you have done in the project, and
- b) what you have found out.

That is, say that the students were involved in a research project; they are to reflect on how they found out as well as what they found out. In other words, reflection is to be on the *process* as well as the *outcome* of the project.

In reflecting on the processes and the outcome, you may use the following three stages.

- Stage 1. Start by recalling what happened during the period of time under consideration. This period could be the time since the last meeting or the duration of the whole project. Record as many incidents as you can in any order that they come

to your mind. Butchers' paper or a blackboard is a good means to record these memories.

- Stage 2. Make value judgments on the events that you remembered. Which ones seemed to have worked and which ones seemed to have not worked? There may be some disagreement between the different participants on what worked and what did not. Simply record this disagreement at this point; this is useful for learning from the project about the participants and their values and experiences.
- Stage 3. Try to explain why some things worked and why some things did not work in the project. At this stage we need to go beyond our direct impressions to try to make theories about what works and what does not work so that we are in a better position to learn from it. Try to make as many alternative theories as possible. Some theories are more obvious than others. Some can be discarded by logical arguments, some may require further evidence.

7.2 Documentation

Most schools have so far documented their projects in written report form: these reports, used previously for initiation into SARUA, could be used as exemplars. Also useful for this phase is the video produced by the Inala State High School students, in which they documented their activities for that year. As preparation for the project's documentation, get your students to take another close look through the reports and the video, as they can act as motivators for your students. (If your SARUA group is excited by this video as a medium of documentation, remember that it took a group of students the whole year to generate the video and one term to shoot it, under the close supervision and training of a specialist teacher.)

7.2.1 Content and Structure of Your Report

Closely examine the different structures of the reports - some are reporting mainly research (usually the first year of SARUA projects), some report mainly action (usually subsequent years of SARUA projects) and a couple integrate both research and action.

The following are two suggestions of possible structures that you may want to use. Use these as exemplars only to help your group arrive at a structure that suits your needs.

Structure A

A Predominantly Research Report (first year of a SARUA project)

- Cover page including title of project, researchers, date and who published it.
- An inside cover that also includes the date of publication.
- Abstract/Executive Summary (summary of the project and of the main findings and recommendations).
- Introduction (why, who, what, when).
- Methods (what have you done, what subjects were involved, what instruments were used and what procedures were followed).
- Findings/Results (the results of your research - what you found in raw scores).
- Conclusions/Discussions/Analysis (analysis of the findings).
- Future Recommendations (What were your recommendations as a result of the research?).

- Appendices that may include the instruments used, any relevant correspondence and documents of interest to the reader.

Structure B

A Predominantly Action Report (subsequent year of a SARUA project)

- Cover page including title of project, researchers, date and who published it.
- An inside cover that also includes the date of publication.
- Abstract/Executive Summary (summary of the project and of main findings and recommendations).
- Introduction (why, who, what, when).
- Action (What action we took as a result of making the recommendations).
- Evaluation/Reflection (Did our activities make a difference?).
- Future recommendations (The action we advise to follow on from here).
- Appendices that may include any relevant correspondence and other documents of interest to reader.

7.2.2 Writing Style

After you have determined the structure of your report, the group should examine the style of writing in the exemplar reports. As a genre, reports have many language features in common.

Some points to remember include: (American Psychological Association, 1994)

- Reports use formal language (written clearly for an unknown audience).
- Be sparing with personal pronouns (use the collective “we” and “us”, as you are writing on behalf of a group of people).
- Use of the same words throughout the text, for instance use “female” only instead of using “female”, “girl” or “woman” at different times.
- Craft your work carefully - use short words and short sentences, but not to the point of boredom or at the cost of interesting sentence structures.
- Be careful with your verb tenses - some parts of your report will be in different tenses, so don’t confuse them. For example:
 - ⇒ “Introduction”, “Methods” and “Findings” can be written in the past tense (ie, “Our surveys showed...”) or the present perfect tense (ie, “Our surveys have shown”),
 - ⇒ “Conclusions” can be written in the present tense (ie, “It is obvious that...”),
 - ⇒ “Recommendations” can be written in the future tense (ie, “SARUA will organise a trip to the university next year....”).
- Use the active rather than the passive voice (Not “The survey was designed by us”, but “We designed the survey”).

- Learn how to use a word processor and type your text.
- An important consideration is to use inclusive language, which attempts to reduce bias in language and give fair treatment to individuals and groups in our society (this includes gender, sexual orientation, racial/ethnic group, disability, and age) (QUT, 1996).

Some things to avoid include:

- the use of poetic techniques and expression (eg, metaphors, similes, highly descriptive and persuasive language);
- the use of colloquial terms and clichés; and
- wordiness. Don't use "at the present time" when you could use "now"; don't use "there were several students who completed the surveys" when you could say "several students completed the surveys".

7.2.3 Developing the Report

Step 1: Mapping

Now that you have decided on a structure for your report you can brainstorm with your whole group to determine its contents. We will start with a process we will call 'mapping' - that is, simply determining in note form a general indication of what is going to be written in each section.

You will need plenty of butchers' paper, felt pens and a list of the headings that your group has chosen for your report's structure. (Using butchers' paper for each section of the report makes Step 2 easier. The whole group can see what is happening and the smaller groups can then physically take these papers filled with ideas away to use them for drafting.)

Nominate someone as recorder. Now start at the beginning of your report and, section by section, write down some general ideas as to what can be included in each section. Use your minutes to help remind you of what you have done through the year, and perhaps a couple of our exemplar reports to guide you. First write down all the ideas that students have and later sequence them in some logical order.

(You may want to leave the general recommendations until later, after the rest of the report has been written.)

Step 2: Developing the First Draft

Divide your SARUA group into smaller segments (pairs or even individuals). Divide the tasks between the groups - for example, one group could take responsibility for writing up "Methods" and "Findings" while another could write up the "Introduction". If different groups of students were working on different activities then each group should write the story of what they have done in the project.

Each group should take away the brainstormed ideas on the butchers' paper from Step 1 and use them as a guide in their writing. Previous SARUA reports should also give each group a clearer direction. The coordinator should move from group to group to give help and suggestions throughout this period. Word Processing should be used at this stage and each group will need their own disk on which to save their documents.

Step 3: Editing

Most writers, even those with great experience, benefit from editing each other's work. When the first drafts are completed, each group needs to print out their work. Then bring everyone back into the large group again and different groups can edit each other's work. This also allows the group to decide on overall formatting of heading and sub-headings. Differences in style should be clear now and if possible agreement on style should be negotiated.

At this stage the group may be able to agree on the overall recommendations from the project. Start with a brainstorming session and get some students to finalise the writing of these recommendations.

Then it's back to the computers to make any changes necessary.

Step 4: Formatting and Publishing

When the document is finished (you may need one more editing session) someone needs to be responsible for formatting it properly. It is best to leave this task to one or two students with considerable computer experience. Once this is completed it can be published and bound.

Allow the group to decide on who needs to be given a copy. You may think about the school library, the school administrators, copies for each member of the group, other people or bodies implicated in the recommendations, the Guidance Officer and anyone who has helped you with the project in a significant way. In the past, some schools have made presentations of the reports on parade or in form classes.

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APPENDIX 1

EXTERNAL COLLABORATION AND SUPPORT

UNIVERSITIES

All tertiary institutions have staff who are engaged in the area of equity in education. Most institutions also have a form of alternative entry, and often some on-campus support networks, for students from some disadvantaged backgrounds (ie, Aboriginal and Torres Strait Islanders, low socio-economic status, NESB). First point contacts are included below:

BRISBANE UNIVERSITIES:

AUSTRALIAN CATHOLIC UNIVERSITY (ACU)

PO Box 247
Everton Park,
Brisbane, Qld 4053
Telephone: (07) 3855 7249
Facsimile: (07) 3855 7249

QUEENSLAND UNIVERSITY OF TECHNOLOGY (QUT) (campuses at Gardens Point, Kelvin Grove, Carseldine)

Admissions Manager
Queensland University of Technology
Victoria Park Road
Kelvin Grove Qld 4059
Telephone: (07) 3356 1195
Facsimile: (07) 3864 3984
E-mail: Admissions.enq@qut.edu.au

Q-Step Program:

Phone: (07) 3863 3731 or (07) 3864 9675
Fax: (07) 3864 5455
Email: qstep@qut.edu.au

Oodgeroo Unit (for Indigenous Students)

Phone: (07) 3864 3610

GRIFFITH UNIVERSITY (GU)

(campuses at Nathan, Gold Coast and Mt Gravatt, Logan;
Queensland College of Art, Queensland Conservatorium of Music)
Associate Director, Student Administration,
Griffith University
Brisbane Qld 4111
Telephone: (07) 38375 7700
Facsimile: (07) 3875 7957
E-mail: student_enquiry@gu.edu.au

UNIVERSITY OF QUEENSLAND (UQ)

(campuses at St Lucia and Gatton)
The Secretary and Registrar
The University of Queensland
St Lucia Qld 4072
Telephone: (07) 3365 2203
Facsimile: (07) 3365 1199
Internet: <http://www.uq.edu.au/admissions>
E-mail: AdmissionsEnquiries@mailbox.uq.edu.au

REGIONAL UNIVERSITIES:

CENTRAL QUEENSLAND UNIVERSITY (CQU) (campuses in Bundaberg, Emerald, Gladstone, Mackay and Rockhampton)

The Registrar
Central Queensland University
Rockhampton Mail Centre Qld 4702
Telephone: (079) 30 9777
Facsimile: (079) 30 9438

UNIVERSITY OF SOUTHERN QUEENSLAND (USQ)

Student Administration
University of Southern Queensland
Toowoomba Qld 4350
Telephone: 1800 81 1380 (free call)
Facsimile: (076) 31 2893

JAMES COOK UNIVERSITY of NORTH QUEENSLAND (JCU) (campuses in Townsville and Cairns)

Manager, Student Administration
James Cook University of North Queensland
Townsville Qld 4811
Telephone: (077) 81 5255
Facsimile: (077) 79 6371
E-mail: admissions@jcu.edu.au

SOUTHERN CROSS UNIVERSITY (Sthn Cross) (campuses in Lismore and Coffs Harbour)

Student Administration
Southern Cross University
PO Box 157
Lismore NSW 2480
Telephone: (066) 20 3000
Facsimile: (066) 22 1300

SUNSHINE COAST UNIVERSITY COLLEGE (SCUC)

Student Administration
Sunshine Coast University College
Locked Bag No 4
Maroochydore South Qld 4558
Telephone: (074) 30 1234
Facsimile: (074) 30 1111

THE UNIVERSITY OF NEW ENGLAND (UNE)

Admissions Unit
University of New England
Armidale NSW 2351
Telephone: (067) 73 3566
Facsimile: (067) 71 1712
Internet: <http://www.une.edu.au>

TAFE QUEENSLAND

(incorporating campuses throughout Queensland)

Refer to the Department of Training and Industrial Relations (DTIR) for your closest TAFE Institute and campus.

COMMUNITY GROUPS

It may, at times be necessary to raise funds for some of your activities. If your school lies outside the inner metropolitan areas trips to the nearest city and university are invaluable for allowing students to experience at least some aspects of university culture. Some groups to target to supplement your own fund raising could include:

Parents and Citizens Associations, ASSPA, District Offices, Student Councils/Bodies, Zonta (for gender-based projects), Country Women's Association, Local Businesses, Apex, Lions, Rotary clubs.

In addition three **Statewide Support Units** have been established by Education Queensland. These are:

- Aboriginal and Torres Strait Islander Education Support Unit;
- Low Incidence Support Unit; and
- Open Access Support Unit.

APPENDIX 2

INFORMATION SHEET FOR STUDENTS AND PARENTS¹

Thank you for volunteering to join the project Student Action Research on University Access (SARUA) conducted by This is a brief summary of the aims of the project and its structure.

Aims of SARUA

The overall aim of this project is to increase the participation of students from disadvantaged groups (eg, low socio-economic, Non-English Speaking Background, Aboriginal and Torres Strait Islanders) in higher education. You will play an important role in breaking down barriers which may be preventing students at your school from considering higher education as a career option.

The project has the following characteristics:

- A team consisting of school students, their school staff and university staff working together to try to find out the needs of students from the disadvantaged backgrounds and to solve some of the problems with regard to having access to university education.
- Part of the project aims to give you more knowledge about university in order to help you and your friends at school to be more ready for university if you decided to go there after school.
- At the same time you will be engaging in activities such as planning, collecting data and information, problem solving, analysing and report writing - all skills necessary for success in both secondary and tertiary education.
- The project involves both research (finding out what the problems are) and action (deciding what to do about these problems), based on the particular needs of the school.
- At every stage of the project the student will be involved in the decisions effecting the running of the project in the school.

Structure of SARUA

The project has four main stages:

1. *Selection of participating students.* It is expected that a team of students and one staff member will be selected from your school to work on the project. Students are selected based on their commitment to the project. We DO NOT expect a commitment to go to university.
2. *Project planning.* A workshop will be conducted that aims at increasing your awareness about the university and helps you gain some appropriate research skills and knowledge to enable you to make up your research questions and begin your research at school. By the end of the workshop you and your coordinator should have planned a research/action project to be conducted in your school over the next few months.
3. *Project conduct.* You and your coordinator should meet once a week at school in order to research and conduct your projects. You will be meeting with the coordinator during school time (Outside staff will be available to assist should the need arise.)
4. *Project reporting.* The last stage of the project will involve a time for in which conclusions will be drawn about the research and you will compile reports outlining the work that you have done and your attempts at solving the problems in your school, including any action you may feel is necessary to break down any barriers to tertiary access that you have identified within your school.

We have found from past experience that both you and your school benefit in several ways from being involved in this project. You will gain leadership, research and social skills from participating, as well as learning more about universities and the people who attend them and work in them. This can help you make more informed decisions about your own future career and we will help you wherever we can. With your increased knowledge, and also through your research and action, you will also be able to increase other students' knowledge about universities and hopefully encourage students at your school to continue on to higher education in greater numbers..

As a sign of your commitment to the project we ask you to sign the following form and get it also signed by your parents/guardians and return it to your coordinator.

¹ Modify as appropriate to fit in the plans from your project

PARENT/GUARDIAN PERMISSION

Congratulations on your son/daughter being accepted into the SARUA project. We hope that participation in this project will significantly improve both the individual's and the school's knowledge about, and access to, higher education.

Your son/daughter is asked to sign this form as a sign of their commitment to the project and you are asked to sign it to give your permission for them to join.

ADD DETAILS ABOUT WHAT IS INVOLVED IN THE PROJECT

I, _____ (Parent/guardian's name), give my permission for
_____ (Student's name) to participate in the project SARUA described
above and to attend QUT under the above mentioned circumstances.

_____ (Signature) _____ (Date)

I, _____ (Student's name) accept to be part of the project and commit
myself to co-operation with other students and school staff involved in the project SARUA as discussed
above as long as I decide to remain in it.

_____ (Signature) _____ (Date)

For further information about the project, please contact

APPENDIX 3

DEVELOPING AND MAINTAINING COOPERATIVE GROUPS

Cooperative social skills do not develop naturally - many of the skills needed to interact cooperatively need to be taught explicitly throughout the project, for example, the skills of active listening, giving constructive criticism and negotiating. These skills, and others, may need to be taught overtly and evaluated as part of the ongoing project if you see your groups running into difficulty as they are working together (and don't forget that teaching these skills could even prevent the groups from developing interaction problems in the first place).

There are many excellent resources on cooperative teaching and learning available through the Queensland Education Department that have found their ways into School Support Centres and schools. Some references that we have used in developing the information below include:

Graves, N & Graves, T. (1990). *A PART TO PLAY: TIPS, TECHNIQUES AND TOOLS FOR LEARNING COOPERATIVELY*. Melbourne: Latitude Publications.

Hill, S & Hill, T. (1990). *THE COLLABORATIVE CLASSROOM: A GUIDE TO COOPERATIVE LEARNING*. Victoria: Eleanor Curtain Publishing.

Johnson, D. W., Johnson, F. P. (1991). *JOINING TOGETHER: GROUP THEORY AND GROUP SKILLS*, (4th Edition). Englewood Cliffs: Prentice Hall.

Cooperative Learning and the Coordinator as Facilitator

One of the coordinator's roles in SARUA is that of facilitator - to make the work easier for the students to handle and to promote action. As such, one of your major concerns will be to help with the task the group is working on. However, of equal importance are the cooperative social processes needed for effective and efficient teamwork.

Graves and Graves (1990:7) have identified some basic principles of cooperative learning which you may like to use in setting up your project, including:

1. Positive Interdependence (We sink or swim together)

Some ways to create a 'we' rather than 'me' attitude within the project could include:

- creating a common goal for the group to strive for;
- a fair division of labour ensuring the task is broken into equitable segments;
- a shared name, symbol and group identity, including shared space and resources;
- assigning specific functions to each individual so that the group has complementary/interconnected roles - eg:
 - ⇒ recorder (records the processes/decisions of the group - this will be especially important later on in the documenting stage of the project)
 - ⇒ timer (ensures the group starts on time, paces appropriately and finishes on time)

- ⇒ monitor (identifies those being disruptive or not doing their share of the work, reminds them they are letting their friends down, informs other group members of this)
- ⇒ encourager (encourages members for work well done)
- ⇒ evaluator (evaluates the group's processes and performance).

2. *Individual accountability (no hitch-hiking or freeloading)*

- Team members must understand that they have 2 tasks to accomplish within the project:
 - (I) to do their own job that the group has assigned them, and
 - (II) to encourage their team members to do their jobs and to help them where possible.

3. *Explicit Training in Interpersonal Skills (we are not born co-operative)*

Unless group maintenance is cooperative, task related activities may not be completed, therefore team members may need to learn both

- task related skills for working together effectively (coordination, organisation, recording of minutes etc), and
- group maintenance skills (how to relate well to, and interact with, others).

4. *Reflection (how to monitor the group's experience)*

- team members should identify and use the processes they have learned in order to maintain cooperative interactions;
- in times of potential or real conflict team members need to set goals for their team and themselves on how to improve their team performance.

Group Formation and the Coordinator's Role

When groups form, they often undergo some common phases. Below we list four of the most critical stages in group functioning. The facilitator needs to monitor these changes and help the students learn new skills, or reinforce old skills, to make this process successful.

Phase 1 - Group formation

This phase is often characterised by cautiousness and self-consciousness, especially if the group is heterogeneous and does not know each other well. The facilitator needs to introduce activities which help them get to know each other and build relationships based on cooperative values. The project, its goals, procedures and successes must become "ours".

Some suggested skills for the facilitator to introduce in this phase include:

- active listening
- clarification
- responding in a supportive manner

(Variations of these can be found in the resources listed at the beginning of this appendix)

Some strategies that could be used in this phase include defining procedures that will be used in future meetings:

- Forming an identifiable group (creating symbols for the group to use that are recognisable within the school as a whole, a common place and time to meet, making SARUA badges, a logo, motto and title for the group, etc)
- At this time, rules could be set out to encourage cooperative processes (ie, Cooperate - everybody gains; Listen to everyone - respond thoughtfully; Know your task - do your share; Encourage and help each other - no put downs; Enjoy trust and friendship - it is part of success.)
- Function formation (assigning functions at each meeting such as recorder, monitor etc) and basic administrative skills (introducing minute-taking and agenda-setting skills).

Phase 2 - Managing differences in groups

Conflict can develop at anytime as students get to know each other and establish their own personalities, priorities and positions in relation to the project. If these disputes are not resolved quickly and equitably, this can lead to criticism, rejection and negative relations within the group. Therefore, a facilitator needs to monitor groups carefully to identify this phase and introduce some group maintenance and interpersonal skills building.

Some suggested skills for the facilitator to introduce in this phase include:

- active listening
- giving and receiving constructive criticism
- negotiation
- eliminating put-downs

(Variations of these can be found in the resources listed at the beginning of this appendix.)

Some strategies that can be used in this phase include:

- Problem Solving as a Group
 - ⇒ defining the problem
 - ⇒ brainstorming
 - ⇒ clarifying and elaborating ideas
 - ⇒ seeing consequences and finding alternatives
 - ⇒ criticising ideas (not people)
 - ⇒ finding solutions
- Managing Differences
 - ⇒ - stating positions
 - ⇒ - seeing the problem from another viewpoint
 - ⇒ - negotiating
 - ⇒ - mediating
 - ⇒ - reaching consensus

- Making “I” Statements.

When conflict occurs due to interpersonal factors, resolution may be as simple as identifying personal conflict styles within the group. One simple way of doing this,

and allowing group members to understand how they effect each other by the way they act, are making “I” statements. For example, one person can say to another: “When you....(say that).....I feel...(that you are attacking me personally)..... because..(you use such force)...”

From here, members of the group can be made more aware of how their personal style can be a barrier to the group’s progress.

- **Identifying Blocking Behaviours in a group situation.**

If the facilitator, or group members, identifies inappropriate behaviours in a group, the following strategy can be useful. (A blackboard and chalk will be necessary for this activity.)

- (I) On the blackboard write “Behaviours that hinder the group” and “Behaviours that facilitate task completion”.
- (II) Perform a task. Have the group identify and describe the behaviours in each section
- (III) As a group, discuss their observations further. Identify how and why the blocking behaviours are being used, how they might be changed and then replaced with behaviours which facilitate task completion.

Phase 3 - A cohesive action phase

If the above process has been worked through successfully the group can go on to know and trust each other, and accept and value different points of view. Groups can now meet deadlines, perform tasks and satisfy their aims and goals.

Phase 4 - Reflection

Once the task is completed, there needs to be time for reflection, reflect on both the task and the cooperative skills needed for the satisfactory completion of the task. (See Section 7.1 on Reflection).

APPENDIX 4

DEVELOPING INTERVIEWS

Benefits

- can provide more data than surveys can - more in-depth and informative
- body language can tell its own story
- fewer lies will be told since clarification and further questioning is possible
- it is useful with target groups with low English literacy.

Drawbacks

- it is more time consuming - not useful on large sample
- reaches fewer people
- transcription of the interviews can take a long time

Selecting the questions for the Interview:

- See the similar section in developing questionnaires and surveys.
- In addition try to use questions that do not lend themselves to simple yes and no answers (ie, open-ended questions). For example instead of asking “did you like school” ask “how did you feel about school” or “can you tell me about your feeling about the school?”
- perform a trial interview as discussed in the survey/questionnaire section.

Planning the Interview

Interviews can be structured (like orally presented surveys) or unstructured (like an informal conversation). Structured interviews are analysed easier and need a number of open ended key questions which helps to prompt the interviewer. Unstructured interviews allow both interviewer and informant to explore the issue widely at will - however, it is more difficult to analyse the information later as it is not tightly structured. Unstructured interviews need more experience and a more careful recording mechanism.

Plan how you are going to record your interview - either by taking notes throughout the interview or by taping it. If you plan to tape it, you must ask the interviewees' permission and transcribing the tape is time-consuming. However, note-taking can be distracting and the interviewer might miss some important information.

Interviews can take the form of :

- focus groups (small groups of interviewees) - this canvasses the opinions of a wider range of people in a shorter time; interaction between the group members can be creative in terms of responses but do not let one person lead; and remember, some people may not speak freely in front of others (ie, younger/older students; females/males).
- individuals - interviewing individuals will take a longer time, but the informant may be more honest and open. However, this form of interviewing does not have the potentially enriching cross-fertilisation of ideas of focus groups.

Choose how many subjects you need to interview. In conducting interviews we are usually more interested in an in-depth investigation of the issues and not so much generalising to a larger population. Hence keep the number of informants down if you have a unstructured interview.

Informants

Your informants can be chosen at random, or deliberately selected. If you choose them yourself, ensure they are representative of your target group, knowledgeable about the issue and articulate.

Conducting the Interview

- Tell the informant the purpose of the interview, what will be done with the results and whether the interview will remain anonymous.
- Choose a relaxed location with no distractions or interruptions, on neutral ground.
- First questions should always be friendly and easily answered.
- Ask for clarification when necessary and feel free to extend a question if you feel more information may be forthcoming. Ask for examples when necessary.
- When a question is not understood, do not repeat it - rephrase it.
- Do not rush to fill pauses - your interviewee may need time for reflection.

After the interview

It is desirable to return notes of the interview to the people interviewed to check if it is representative of their views.

APPENDIX 5

DEVELOPING SURVEYS/QUESTIONNAIRES

Benefits

- allows a large group to be accessed and data collected quickly and cheaply
- analysis can be easy if the survey is well constructed
- room for additional comments can provide extra information

Drawbacks

- sound English literacy is needed to take part
- some people give socially desirable answers, deliberately lie or give flippant replies
- has very low return rate if sent by mail
- not very good for in-depth information about respondents

Type of questions

Question type	Example	Good for	Problems
Open-Ended Questions	What are the sources of information you have about fees at university?	Respondents say what is important to them - a wide range of views are obtained	Difficult to analyse if you have a large number of respondents
Stem Plus	The things that stop me from going to science are: _____	As above	As above
List of responses	Circle the factors that you have considered in making your decisions: a,b,c,d, etc	Easy to analyse by counting numbers responding to each item - allows multiple choices	Does not allow for additional points unless it includes "Others" option -Does not indicate the strength of feeling on each option
Yes/No	Do you intend to go to University when you finish High School? Yes/No	Easy to analyse by counting numbers responding to each item	As above
Ranking	Rank the following factors from 1 to 5 as they apply to your situation:	As above - it allows for measuring magnitude of response	Does not allow for additional points unless it includes "Others" option
Likert Scale	Agree, Neutral, Disagree	Easy to analyse - very flexible in number of options	Subjects forced to choose one of given options - different people may interpret options differently.

It is usual to combine closed-ended questions and open-ended questions in the same survey. At the end of a closed-ended question one can say "Comment?" to gain both.

Design the survey

- Firstly work out how you will analyse your responses. For example, do you need to identify how different groups see the issue? If so, you will need your audience to identify themselves in terms of male/female; year level/age banks; teachers/parents/students; ethnic groups etc. at the top of the survey. These types of questions are called background questions.

- To determine the questions you need to include on the questionnaire, have a brainstorming session and try to identify as many issues/variables as you can that you would like to know about respondents. For example: attitudes, knowledge, ability. For each of these issues/variables try to formulate some sub-variables that constitute them. For example attitudes can refer to confidence, liking something, enjoying doing, etc. Then attempt to write as many questions to test for that variable.
- Next, create your questions using the types of questions discussed above. It is useful to develop groups of questions on common themes/variables as discussed above.
- Clearly state the instructions as to how to answer the questions.
- Place your easy, or friendliest questions first to get your writer on side.
- Use language that everyone will understand
 - ⇒ make sure questions are clear and use simple vocabulary
 - ⇒ questions that are too general or open to different interpretations will effect your results
 - ⇒ do not use questions that are worded in the negative.
- Show your survey to others who have some experience in survey design and let them comment on it. Trial your survey on some subjects similar to the ones that you are targeting in the study. Modify the instructions and any vague questions as required.

Points to note

- Make your survey fairly brief.
- At the beginning of your survey, state its purpose, what use will be made of the information, whether the information will maintain anonymity and what you will do with it when it has been completed. If you do this well, it is also useful publicity for your project.
- Many researchers have found it useful to print surveys on coloured paper so that it is more likely to be noticed, completed and returned.
- Remember surveys have very low rate of return. Personal contact is best when surveys are being distributed.